FINDING OF NO SIGNIFICANT IMPACT

ENVIRONMENTAL ASSESSMENT, WY-070-EA13-226
U.S. Department of the Interior
Bureau of Land Management, Buffalo Field Office, Wyoming

Uranerz Energy Corporation, Hank Unit Uranium *In-Situ* Recovery Project

Bureau of Land Management Mine Plan of Operations, WYW-169904; Wyoming Department of Environmental Quality, Land Quality Division, Permit to Mine PT778; and, Nuclear Regulatory Commission Source Material License SUA-1597

FINDING OF NO SIGNIFICANT IMPACT (FONSI): On the basis of the information contained and analyzed in the following (all incorporated here by reference):

1. U.S. Department of the Interior (DOI), Bureau of Land Management's (BLM's) Environmental Assessment (EA) WY-070-EA13-226.
2. Uranerz Energy Corporation's (Uranerz') Mine Plan of Operations (Mine POO or POO).
3. Nuclear Regulatory Commission's (NRC's) General Environmental Impact Statement (GEIS) for *In-Situ* Leach Uranium Milling Facilities, NUREG-1910; approved May 2009.
4. NRC's Supplemental Environmental Impact Statement (SEIS) for the Nichols Ranch ISR Project in Campbell and Johnson Counties, Wyoming – Supplement to the Generic Environmental Impact Statement (SEIS) for *In-Situ* Leach Uranium Milling Facilities, NUREG-1910 Supplement 2; approved January 2011.
5. NRC's Source Material License (SML) SUA-1597; issued July 2011.
6. Wyoming Department of Environmental Quality (WDEQ) Land Quality Division (LQD), Permit to Mine PT778; permitted December 2010.
7. Memorandum of Agreement (MOA) Among the United States Nuclear Regulatory Commission (NRC), United States Bureau of Land Management (BLM) Buffalo Field Office (BFO), the Advisory Council on Historic Preservation (ACHP), the Wyoming State Historic Preservation Officer (WYSHPO), Cheyenne River Sioux Tribe, Crow Tribe, Eastern Shoshone Tribe, Fort Peck Assiniboine/Sioux Tribe, Northern Arapahoe Tribe, Northern Cheyenne Tribe, Oglala Sioux Tribe, and Uranerz Energy Corporation Regarding Mitigation of Adverse Effects to Historic Properties From the Nichols Ranch ISR Project in Campbell and Johnson Counties, Wyoming; 2011 ("NRC MOA").
8. Memorandum of Agreement (MOA) Among the Bureau of Land Management (BLM), the Advisory Council on Historic Preservation (ACHP), the Wyoming State Historic Preservation Officer (WYSHPO) and Uranerz Energy Corporation (Uranerz) Regarding Mitigation of Adverse Effects to Historic Properties from the Hank Unit of the Nichols Ranch *In-Situ* Recovery Project in Campbell County, Wyoming; 2015 ("BLM MOA").

and all other information available to me, I determine that:

(1) Alternative 1 conforms to the Buffalo Field Office (BFO) Resource Management Plan (RMP) (1985) and its' amendments (2001, 2003, 2011) and 43 Code of Federal Regulations (CFR) 3809, *Surface Management [of Locatable Minerals]*; and,

(2) Alternative 1 does not constitute a major federal action having a significant effect on the human environment.

Therefore, an Environmental Impact Statement (EIS) is not required. I base this finding on my consideration of the Council on Environmental Quality's (CEQ's) criteria for significance (per 40 CFR 1508.27), both with regard to the context and to the intensity of the impacts described in the BLM EA (#WY-070-EA13-226).

CONTEXT: The proposed operations as described in Alternative 1 of the BLM EA WY-070-EA13-226 are insignificant in the national and regional context. There will be non-significant impacts in the local context.

Mineral Exploration and Development

Mineral exploration and development (leasable, locatable, and salable minerals), especially energy minerals (such as coal, oil, natural gas, and uranium), is a long-standing land use in the Powder River Basin (PRB). The PRB provides over 42% of the nation's coal, and the PRB FEIS's Reasonably Foreseeable Development scenario (RFD) predicted and analyzed fluid mineral development including more than 51,000 gas (including coal bed natural gas (CBNG)) and 3,200 oil wells. BFO encompasses all of Campbell, Johnson, and Sheridan counties, which constitute the middle portion of the PRB.

Leasable minerals within the project area include coal, oil, and gas (including CBNG). There are no coal mines in or near the project area, nor are any foreseeable. The closest is the Black Thunder Coal Mine, approximately 30 miles east. The federally-owned oil and gas minerals within the project area are leased by BLM. There are currently six CBNG and three conventional oil/gas wells operating within the project area. Salable minerals within the project area include sand/gravel, rip rap, and boulders. No requests for obtaining such federally-owned minerals have been made, or are likely, from within the project area.

Many locatable minerals may exist within the project area, including "precious" metals such as gold, silver, and platinum, "base" metals such as copper, aluminum, and nickel, as well as other metals such as uranium, and semi-precious and precious gemstones. However, the only locatable mineral known to occur in potentially commercially-viable amounts is uranium. Uranium exploration and development has been occurring in the PRB since the 1950s. *In-situ* uranium mining has been conducted in the PRB since at least the 1980s, and is the only mining method currently practiced in the BFO portion of the PRB; this includes projects having no BLM-administered lands. Nearly all producing, and planned and proposed uranium projects across Wyoming and much of the western U.S. (including Arizona, Colorado, Montana, Nebraska, New

Mexico, Oregon, South Dakota, Texas, and Utah) involve ISR mining. Currently, there are a number of approved, and pending or proposed, uranium ISR projects in the BFO portion of the PRB (see tables below).

Permitted Uranium Projects in Campbell, Johnson, and Sheridan Counties, Wyoming						
			Permitting Agency			
Company	Project	Distance from Hank	NRC	WDEQ	BLM	Status
Cameco Resources, Inc. / Power Resources, Inc. (CRI/PRI)	Ruth	7 mi southwest	Y	Y	**Y**	Inactive
CRI/PRI	North Butte	1 mi northwest	Y	Y	na	Active
Cotter Corp.	Charlie	within 20 mi	Y	Y	na	Inactive
Uranerz Energy Corp.	Nichols Ranch / Hank Unit	4.5 mi west / na	Y	Y	na / **Y**	Nichols Ranch Active / Hank Not Constructed
Uranium One, Inc.	Willow Creek	3 mi northwest	Y	Y	**Y**	Active
Uranium One, Inc.	Moore Ranch	12 mi south	Y	Y	na	Not Constructed

Pending / Proposed Uranium Projects in Campbell, Johnson, and Sheridan Counties, Wyoming		
Company	Project	Includes BLM-administered Lands?
AUC, LLC	Reno Creek	N
Bayswater Uranium Corp.	Pine Tree	N?
CRI/PRI	Brown Ranch	N?
CRI/PRI	Ruby Ranch	N?
CRI/PRI	Taylor Ranch	N?
Uranerz Energy Corp.	Collins Draw	N?
Uranerz Energy Corp.	Jane Dough	N
Uranerz Energy Corp.	North Rolling Pin	N?
Uranium One, Inc.	Willow Creek Expansion	**Y**

N = No; N? = Not likely based on available information; determination awaiting final legal description.
na = Not applicable.; Y = Yes; **Y** = Contains BLM-administered lands, therefore BLM approval is required.

Cultural Resources

BLM determined that the project will result in an adverse effect to the setting of the Pumpkin Buttes TCP (48CA268) and sites 48CA6148, 48CA6748, 48CA6751, and 48CA6753. The 2015 agreement, *Memorandum of Agreement Among the Bureau of Land Management, The Advisory Council on Historic Preservation, the Wyoming State Historic Preservation Officer and Uranerz*

Energy Corporation Regarding Mitigation of the Adverse Effects to Historic Properties from The Hank Unit of the Nichols Ranch In-Situ Recovery Project in Campbell County, Wyoming ("BLM MOA") (2015), codified the resolution of the adverse effects. The BLM MOA contains mitigation measures that resolve the adverse impacts to the TCP, which are incorporated into the proposal.

Wildlife Resources
The impact of the Hank Unit cumulatively contributes to the potential for local extirpation of the Greater Sage Grouse (GSG) yet its effect is acceptable because it is outside priority habitats and is within the parameters of the PRB FEIS/ROD and current BLM (WO-IM-2012-043) and Wyoming (WY-IM-2012-019) GSG conservation strategies. With application of Standard Operating Procedures (SOPs), applied mitigation, Required Design Features, and Terms and Conditions (T&Cs) identified for GSG under the proposed action, impacts caused by surface-disturbing and disruptive activities would be minimized.

INTENSITY: CEQ regulations provide for the consideration of 10 specific issues in order to properly evaluate the intensity of a given project. These are addressed below.

1. **Impacts that may be beneficial or adverse.**
   The implementation of Alternative 1 will result in beneficial effects to mineral and revenue production. Uranium is an important natural energy-generating substance, and the uranium produced from this project will help produce electrical energy needed by industry and the general public.

   Design features (Operator-Committed Mitigation Measures) and other mitigation measures (T&Cs) were included in Alternative 1 to preclude unnecessary or undue degradation or significant adverse impacts of public lands (per 43 CFR 3809.415 and .420).

   There will be adverse effects to the cultural resources; however the effects are addressed by numerous mitigation measures as described in the BLM MOA.

2. **Public health and safety.**
   Alternative 1 does not pose a significant risk to public health and safety. All NRC and WDEQ-required safety precautions and procedures will be implemented. Air and water sampling will occur on a regular basis; soil will be sampled also, should a leak or spill occur. NRC and WDEQ both monitor and regulate air and water quality, and their stringent standards must be met at all times.

3. **Unique characteristics of the geographic area.**
   There are unique characteristics in the geographic area of the project: the Pumpkin Buttes, and the Pumpkin Buttes Traditional Cultural Property (TCP). The Pumpkin Buttes are erosional remnants capped by the Tertiary-age White River Formation. Occurrences of this formation in the BFO area are rare. The White River Formation

often contains fossils, including petrified wood. The proposed wellfield and infrastructure are not proposed on the buttes themselves; the White River Formation will not be impacted.

4. **Degree to which effects are likely to be highly controversial.**
No highly controversial effects are likely from implementing Alternative 1. There are a number of other uranium ISR projects in the PRB, State of Wyoming, and across the western U.S. (see above), and the effects from these projects are well-known and within acceptable practices.

   Effects to Cultural resources and the Pumpkin Buttes TCP were considered highly controversial. BLM consulted with Uranerz, the Wyoming State Historic Preservation Officer (SHPO), the Advisory Council on Historic Preservation (ACHP), and the Cheyenne River Sioux, Crow, Eastern Shoshone, Fort Peck, Northern Arapaho, Northern Cheyenne, Yankton, Crow Creek Tribe, Lower Brule Tribe, Standing Rock, Rosebud, Sisseton Wahpeton Oyate, and Oglala Tribes in order to resolve impacts to the TCP.

5. **Degree to which effects are highly uncertain or involve unique or unknown risks.**
Virtually all effects from implementing Alternative 1 are certain and non-unique. There will be minor unknown effects to groundwater quality, as its chemistry will likely not be returned to its' exact beginning composition during the groundwater restoration phase. However, these effects will likely be small, and not involve risks to private or public waters, as the NRC, EPA, and WDEQ Water Quality Division (WQD) all must be consulted for approval of the post-restoration groundwater composition prior to reclamation being considered adequate. Part of this approval may include Uranerz obtaining an exemption of the affected aquifer(s) from drinking water standards, thereby releasing it as a potential drinking water source.

6. **Consideration of whether the action may establish a precedent for future actions with significant impacts.**
The location of this project, abutting and overlapping onto a TCP, is anticipated to result in adverse impacts to that TCP. However, it will not set a precedent for future actions with significant impacts.

   In addition, this project is relatively short-term – 10-12 years maximum. Any adverse effects to the TCP from the activities conducted during this project are also relatively short-term (10-12 years). The TCP will not be physically impacted by this project.

7. **Considerations of whether the action is related to other actions with cumulatively significant impacts.**
As analyzed and presented in the EA, this project will not result in significant impacts, nor is it related to other actions with cumulatively significant impacts.

8. **Scientific, cultural, or historical resources, including those listed in or eligible for listing in the National Register of Historic Places.**
   There will be adverse effects to historic properties; however adverse effects will be mitigated through the BLM MOA.

9. **Threatened or endangered species and their critical habitat.**
   No threatened or endangered species or their critical habitat will be adversely impacted by the project activities.

10. **Any effects that threaten a violation of Federal, State, or local law or requirements imposed for the protection of the environment.**
    No effects of the project will threaten such violations.

BFO used relevant scientific literature and professional expertise in preparing the EA. The scientific community is reasonably consistent with their conclusions on environmental effects relative to *in-situ* uranium mining. Research findings on the nature of the environmental effects are not highly controversial, highly uncertain, or involve unique or unknown risks. Uranium mining of the nature proposed in this Mine POO and other similar Mine POOs was predicted and analyzed in the Buffalo RMP; the selected alternative does not establish a precedent for future actions with significant effects. No species listed under the Endangered Species Act, or their designated critical habitat, will be adversely affected. The selected alternative will not have any anticipated effects that would threaten a violation of federal, state, or local law or requirements imposed for environmental protection.

The project is intended to last for approximately 10 to 12 years, including groundwater restoration and surface reclamation. The adverse impacts will not be permanent.

Field Manager: /s/ Duane W. Spencer Date: July 17, 2015